

NANOSYRINGE ARRAY AND METHOD

Abstract

A nanosyringe is constructed using micro fabrication and nano fabrication techniques on a silicon substrate. The nanosyringe includes a membrane of silicon carbide. The position and operation of individual nanosyringes, arranged in an array of nanosyringes, can be independently controlled. A nanosyringe array can inject or extract a fluid from one or more cells or other structures. Microfluidic structures coupled to the nanosyringe allow external pumping or extraction. A cell matrix or organelles of individual cells can be non-destructively sampled in real time.